

THE
BOSTON MEDICAL AND SURGICAL JOURNAL.

VOL. LXXXVIII.]

THURSDAY, APRIL 17, 1873.

[No. 16.

Original Communications.

A CASE OF FRACTURE OF THE INTERNAL TABLE OF THE
OS FRONTALIS ALONE, THE EXTERNAL TABLE REMAIN-
ING UNBROKEN. DEATH. POST-MORTEM.

By W. H. TRIPLETT, M.D., Woodstock, Va.

ON account of the extreme rarity of this form of fracture of the skull, I am induced to publish the subjoined case; and in view of the insidiousness of the inflammatory processes set up, and the formidable lesions of the meninges and the brain substance developed at the post mortem, I give the case somewhat in detail, as gleaned from the note-book of my brother. It occurred in the practice of Dr. Jos. J. Triplett, of Mt. Jackson, Va.

On the night of October 24th, 1872, A. C., blacksmith, aged 45 years, of medium height, spare, but very athletic, was struck with a stone over the right frontal eminence, making a clean, clear-cut wound through the scalp down to the bone, shaped something like the letter V inverted, the legs being about an inch in length, exposing the bone.

A portion of the periosteum, half an inch in diameter, had been carried away, leaving the bone roughened. He had not been stunned by the blow, and had not the slightest suspicion that he had received a mortal wound. He had gone home at once, a distance of several hundred yards, without the slightest inconvenience, and half an hour afterwards presented himself at Dr. Jos. J. Triplett's office to have his wound dressed.

No fracture was discovered, but the patient was advised to treat it as a serious wound, and to stay in his house for some days, keeping quiet and living a little sparingly.

The man ridiculed the idea, insisting "he was'n't hurt much, it was only a little flesh wound." On Monday evening, Oct. 28th, four days after the injury, he again made his appearance, to have his wound examined. He complained of pain in it. Upon inspection, it appeared healthy. It was not known at the time, but the man had worked hard all day at his trade. He was again enjoined to keep quiet, and a saline purgative given him.

On the following evening, Tuesday, the Doctor was sent for, and found his patient in bed, under considerable constitutional disturb-

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ance; was quite feverish, with pulse at 90; severe cephalalgia; had had several chills during the day.

The wound looked healthy, but was again probed, and thoroughly examined, to make certain that no fracture had been overlooked. None was discovered. The man said he had been subject to chills and fever, and that he did not think his condition had any connection with the wound.

An active purgative, with ipecacuanha, was given him, and having had several copious evacuations during the night, he was much improved the next morning. His skin was moist, and pulse normal; no cephalalgia.

The man felt himself so fully restored that he told the Doctor "he thought he did not need any more medicine, and that he would let him know if he did not get along well." He was again urged to keep quiet, and to live on low diet. The Doctor visited him the next day, telling him he had simply called to see him.

He still claimed to feel comfortably, with the exception of an occasional sharp pain through the wound. This was the eighth day since the injury. Friday, he again made his appearance in the Doctor's office; came in laughing. He had just met the party with whom he had had the difficulty, and a reconciliation had taken place. His face was a little flushed, and he had some cephalalgia. At 5 o'clock, P.M., Saturday, the Doctor was again sent for. He found his man sitting up, near the stove, laboring under severe head symptoms. His head was hot, but he kept it near the stove, as he found the most ease in that position. There was severe cephalalgia, with a feeling of fulness, or tension, through the temples; face flushed, and profuse lachrymation; pulse 90, regular, and not very strong; but the carotids were somewhat violent; he was perfectly rational, but exceedingly desirous of sleep; said, "if he did not get something to put him to sleep, he should go crazy." An active cathartic was given him, and a blister applied behind either ear. In the course of several hours, a Dover's powder was administered, with not a little apprehension. The next morning, Sunday, he was a little improved; had slept some during the night, but there was still intolerance of light; he was very talkative, and eager to enter into political discussion; no alteration of pulse; tongue dry. Pupils dilated, the right one the larger of the two. This symptom had been noticed the day previous. The lids of the right eye were red and swollen. The face still seemed preternaturally red. He ate some mush and milk; had been living on that diet from the Tuesday previous.

The man could not be induced to leave the stove and go to bed; "he was chilly, and felt best near the stove." Sunday night, he allowed his friends to put him to bed, with the head elevated. No opiate was ventured upon, for fear of aggravating the head symptoms. The scalp did not appear hot, and from the circumstance that the warmth of the stove gave him ease, and also on account of his

chilly sensations, cold applications were not made to the scalp. Hot bricks were kept to his feet, and spirits of nitrous ether given internally. He appeared much worn and debilitated.

The following day, Monday, the symptoms were worse; pulse frequent and irregular; pupils contracted; the swelling and discoloration of right eyelids increased; some disposition to stupor. The patient was found sitting on the edge of the bed, his feet resting on the floor. Cephalalgia and intolerance of light, but quite rational and talkative, keeping his eyes closed. An ounce of blood was taken from each temple, by means of cups. An active cathartic was administered. In the course of an hour afterwards, he was taken with a severe rigor; fifteen grains of hydrate of chloral promptly arrested it. Two hours subsequently, he had premonitions of another attack, and a small dose of the chloral aborted it.

From this time he rapidly passed into deep stupor. On Tuesday night, he was aroused with difficulty, when he would answer the questions put to him very quickly, but intelligently, and again pass into insensibility. The pulse was intermittent, frequent and small; mouth parched. Wednesday, there was decided coma; insensibility of pupils to light. On the evening of this day, the patient became hemiplegic on the left side; but when the leg or arm was pinched, he indicated sensibility by moving the corresponding limb, as if to stop the procedure, crossing them over to the opposite side. He kept up a constant motion of his right hand about his head, as if driving away flies; previous to this he had used the left hand the most. During the night there was universal paralysis of motion and sensation, and the only visible expression of remaining life was respiration, which was 40 per minute, regular, with occasional sighing; pulse rapid, intermittent, irregular, and difficult to count. Thursday morning, at six o'clock, he died, being fifteen days after the injury.

At three o'clock, P.M., of the same day, nine hours after death, an inquest was held over the body, and a post mortem made, in the presence of the jury, by Drs. Jos. J. Triplett and George W. Koontz. When the scalp was reflected over the site of the wound, the subjacent bone was found white, as though dead, and denuded of periosteum of nearly an inch in extent. In removing the calvaria, several ounces of very offensive straw-colored fluid escaped, mixed with pus and flakes of lymph. Within the calvaria, and immediately under the white discoloration of the external table, the internal table was fractured, and a spicula of bone, a third of an inch broad and about twice that length, was found pressing upon the dura mater, which had become detached over a space an inch or more in diameter. The fracture projected about two lines, and was covered with pus, as was also the dura mater. The membrane had not been perforated, but was readily torn, showing its disorganization in this vicinity. Corresponding with the fracture, there was a cup-shaped cavity of the

anterior lobe of the right hemisphere. It was several inches in extent, quite shallow, and partially filled with pus. The arachnoid and pia mater had been destroyed over this entire surface, by ulcerative absorption, which seemed to have been most intense in the cortical portion, destroying the vascular envelope primarily. The deepest point of the cavity could not have been more than half an inch below the natural level, and was so gradual in the line of ascent to the adjacent surfaces of the cerebrum as to be marked with difficulty. The whole of the right hemisphere was covered with pus and lymph, which was also infiltrated under the pia mater in considerable quantity. In making sections of this hemisphere, there was evident loss of natural consistence throughout, and the anterior lobe was pulpy. The left hemisphere was natural in consistence, showing none of the products of inflammation, but presented numerous hæmorrhagic points, as though engorged.

The jury being satisfied that the man had come to his death by reason of the blow upon his head, desired that the dissection proceed no further, and brought in a verdict in accordance with the facts.

One of the singular features of this case was the circumstance that the man was not stunned by the blow, and the insidiousness of the inflammatory processes. Another extraordinary fact was the absence of convulsions and delirium, notwithstanding the most extensive and destructive inflammation of the meninges and brain substance of the whole right hemisphere. In view of the circumstance that the man had received little or no concussion of the brain, and, *a fortiori*, no contusion or laceration of its substance, the opinion was formed that the trouble grew out of fracture of the internal table, a prediction that the post mortem fully verified.

December 15, 1872.

ELONGATION OF THE UVULA.

By F. B. A. LEWIS, M.D. Harv.

THE following case, coming to my notice a few weeks since, and one of quite a number during fourteen or fifteen years of similar character, has led me to think that many such cases pass unnoticed by the general practitioner as regards the true cause.

Charles G., farmer, aged 40, has been affected with an irritating cough for several months. Has applied to various physicians, and received various remedies, cough mixtures, so-called gargles, &c. &c.; but, experiencing no relief, has resorted to most of the nostrums in general use, besides ordinary house remedies. Has had no soreness in chest, except after each coughing spell. Does not cough until a tickling sensation is felt in the throat, and then the attack is uncontrollable. Is worse lying down, and is unable to sleep much of the time, unless in sitting position. General appearance gradually failing.

On examination, the throat was much congested from irritation, and tenacious mucus adhered to posterior wall. The uvula was seen to be much elongated, twisted to one side from pressure, and having the little bulbous sac of serum at the extremity, as usually seen in chronic cases. One fourth of an inch was at once removed, with scissors for the purpose, and from that time the cough disappeared, and has not returned. It is remarkable that it did not continue for a time, as the remaining irritation or habit generally causes its continuance for a variable period; but in this case it ceased at once, without reappearance. It appears from this, and similar cases, that this difficulty is too often treated by medicinal means, for although astringent washes may sometimes relieve the irritation by shortening the uvula temporarily, it invariably relaxes and reproduces the cough. Of course, the relative capacity of the fauces has much to do as regards the length of the uvula which will cause trouble. In examining some cases, we find it but little elongated from the normal dimension, but we may find a narrow opening and thick, fleshy tongue, upon which it rides almost constantly, and causes as much irritation as would a much longer one in a differently shaped throat. In phthisical patients, as soon as the general system becomes relaxed from debility, the uvula often conspires to aid the harassing cough, and excision of a portion of it generally affords much relief.

Most of the text books instruct us, in removing the uvula, to seize it with forceps, and then with ordinary scissors clip away the superfluous part. In some cases, this is a simple matter; but in many, where the patient is timid, nervous or over-sensitive as regards manipulation about the fauces, it is very difficult to seize, or, if caught, to hold the organ while the scissors are applied, as any slight spasmodic movement will cause the forceps to miss or slip. Oftentimes, also, it being only required to remove one-eighth or one-fourth of an inch of the uvula, the forceps include more than this within the blades.

The scissors referred to in the mention of the case above, were made, at the suggestion of the writer, by W. F. Ford, of New York, and answer the purpose admirably. They are broad, answering for a tongue depressor, probe pointed, curved on the flat and cut on a semicircle, so that it is impossible for the uvula to escape when the blades are being closed. When applied, the points are touching each other, while a proper space is left at the centre of the blades. The tongue is depressed by inserting the instrument, and awaiting until the subsidence of the usual spasmodic action of the fauces and accompanying elevation of the uvula. The latter gradually descends into the space between the blades to the desired extent, and with one pressure of the handles the portion is removed. So much annoyance and suffering has been relieved by this little operation, that it has been thought worth while to remind the general practitioner of its frequent necessity.

Clinical Lecture.

ECCHYMOSIS OF THE EYE-BALL AS A SIGN OF FRACTURE OF THE BASE OF THE SKULL.

Part of a Clinical Lecture, delivered at the Massachusetts General Hospital,
by R. M. HODGES, M.D.

THE ease with which extravasated blood permeates the loose connective tissue of the eyelids and orbit is a familiar fact. The effort of coughing, of vomiting, or of lifting a heavy weight, often causes the rupture of a small vessel and consequent ecchymosis of the eyeball. A cachectic condition of health, or a slight obstruction in the circulation of the eye, is occasionally attended by a similar spontaneous occurrence.

Ecchymosis following injury, though it may be but an insignificant lesion, is sometimes an important symptom. When occurring in the lower eyelid, it has been regarded, by an authority no less than Velpeau, as evidence of a fracture of the base of the skull. Although this statement requires qualification, the phenomena of a "black eye" merit the attention which such a remark invites.

A traumatic extravasation of blood may take place (1) beneath the cutaneous surface of the eyelids, without involving the conjunctiva; or (2) beneath the ocular conjunctiva alone; finally, perhaps, extending to that of the eyelids, and to the integuments externally.

To understand this diversity, it must be remembered that the structure of the eyelids includes a strong aponeurotic expansion, inserted by its larger circumference into the entire border of the orbital cavity, while, by its smaller circumference, it is intimately connected with the tarsal cartilages, which are thus prolonged, as it were, to the very edge of the orbit. This diaphragm separates the connective tissue inside and within the orbit, from the connective tissue outside, which is continuous with that of the temple, forehead and face. It should also be borne in mind that the integuments of the forehead and scalp are closely united to the occipito-frontalis muscle, while the muscle itself is very loosely attached to the pericranium beneath. If a blow on the forehead occasions an extravasation of blood between the skin and the occipito-frontalis, it remains a circumscribed, discolored swelling, which is prevented by the density of the subcutaneous connective tissue from spreading beyond certain narrow limits. Instances of a defined intumescence, following slight bruises in this region, are common, and are described by the expressive name of "bumps." But when a contusion, in front of a line over the vertex from ear to ear, ruptures the muscular or pericranial vessels, the infiltration of effused blood is promoted by every movement of the occipito-frontalis muscle, the loose connective tissue offering little resistance; and the ecchymosis gravitates, first, to the base of the forehead, then into the upper eyelid, and, finally, to the lower. If the injury has occurred near the median line of the forehead, both eyelids may participate in the subsequent discoloration, and with a distinctness proportionate to the size of the vessels ruptured, the amount of blood poured out, and the distance it has to travel. This infiltration invariably limits itself to the external and subcutaneous parts of the eyelids; the aponeurosis

described preventing its penetration inwards. No trace of it is ever found in the ocular conjunctiva. In some instances, blood traverses a long interval to reach the integument of the eyelids, and, when it does, a yellow tint of the skin precedes, sometimes by three or four days, the final "black and blue" stain. If extravasation is accompanied by an open wound, ecchymosis may not take place, for the blood will escape externally, unless prevented by the dressings applied; and the same may be the case if the patient lies on his back in bed, the ecchymosis gravitating backwards, and the eyelids remaining intact.

Such is the mechanism by which ecchymosis of the eyelids takes place, without participation by the ocular or palpebral conjunctiva.

If, on the other hand, the ocular conjunctiva is the seat of a traumatic ecchymosis, either (1) the globe of the eye has received a direct contusion, or (2) an escape of blood has occurred within the orbital cavity. The first event, exceedingly frequent, may be the result of a great variety of accidents, such as falls against an angle of furniture, or blows from a fist; and a diagnosis of the kind of injury can sometimes be made from the character of the ecchymosis. In a fall on the ground, for instance, the nose, the orbital ridge, and the malar bone, effectually protect the globe of the eye from a direct blow, and the ensuing ecchymosis should be confined to the cutaneous parts of the eyelids. Legal medicine may avail itself of this fact, not as conclusive evidence, but as corroborative of other information. In the second variety, where the escape of blood has occurred within the orbital cavity, an ecchymosis of the ocular conjunctiva may be due to a fracture, either in the bones of the orbit, or at some remote point in the base of the skull; in the latter case the blood reaches the orbit along the course of the nerves and through their foramina. The hæmorrhage may be abundant enough to cause protrusion of the eye-ball; or a traumatic aneurism may take its rise from a ruptured ophthalmic artery. It is more commonly the case, however, that a small extravasation occurs, and this, finding its way through the loose connective tissue filling the orbital cavity, shows beneath the conjunctiva of the globe as a dark-red spot. The external surface of the eyelid, separated from the extravasation by the aponeurotic diaphragm, does not become ecchymosed, unless the blood, effused in considerable quantity, after first invading the palpebral conjunctiva, slowly filters through into the subcutaneous connective tissue. In such a case, the integument of the lower eyelid will ordinarily reveal its presence before the upper; and many hours will elapse, after the stain of the ocular conjunctiva, before the lids are involved.

The practical bearing of these anatomical points is illustrated by the case of a fireman, in Ward 32, who, on the 27th of February, fell sixty feet from a ladder, striking on his feet. His thigh was broken, and his lower and upper jaws were fractured by the ladder, which fell upon him. Carried immediately to the Police-station, the globe of his right eye was noticed to be ecchymosed at its lower and outer part. The next morning, and not till then, the external parts about his lower right eyelid became "black and blue," and subsequently those of the lower eyelid of his left eye, and of both upper eyelids. There was no excoriation, or mark of direct injury, upon any part of the face. Rallying from the shock of the accident, he remained drowsy, and sluggish

of intellect, with a very slow, and occasionally intermitting pulse. His right pupil was dilated to twice the size of the left, and he had double vision when both eyes were used. On the 11th of March, he complained of deafness, and a serous discharge began to flow from the left ear, which still continued on the 26th. These various symptoms were pronounced attributable to a fracture of the base of the skull, from indirect cause, viz., a fall upon the feet; the suddenly arrested descent inflicting a blow, through the intermedium of the vertebral column, sufficient to produce the injury. Or, a force, transmitted through the condyle of the lower jaw, may have broken the glenoid cavity of the temporal bone. Or, the fracture of the upper jaw may have extended upward to the ethmoid, sphenoid or temporal bones. In arriving at this conclusion, the ecchymosis of the eyeball was by no means the least important item of evidence.

In 1866, a somewhat similar case, as regards ecchymosis, was the subject of a clinical lecture in this hospital. The detailed records have not been preserved, but the patient was a young girl, who was struck on the top of the head by an iron stove, which fell down a "hoisting way," fracturing her skull. The subsequent removal of a large necrosed sequestrum revealed a fissure extending into the orbit through the frontal bone. In this instance, both eyelids and eyeball were ecchymosed.

In 1852, the notes were made in Paris of a case in which a fracture of the upper part of the orbit, attended by ecchymosis of the eyeball and upper eyelid, occurred in a woman killed by being run over. It was then supposed that time enough had not elapsed before death to implicate the lower eyelid, but since that time other cases have been observed in which the upper lid was alone the seat of discoloration.

It is not to be inferred that fractures of this region never happen without ecchymosis of the eyeball. In twenty-three cases of fracture of the base involving the orbit, observed at St. George's Hospital, London, no suspicion of the injury was derived from the peculiarity of the ecchymosis in five, while it was entirely wanting in eight. But in ten instances, the nature of the injury was made manifest by the blood effused under the ocular conjunctiva. The symptom has, therefore, a decided diagnostic value.

The generalizations which these statements appear to authorize, are:

1. That an effusion of blood beneath the integuments of the skull, if it does not gravitate backwards, often produces an ecchymosis in the cutaneous surface of the eyelids, but never of the conjunctiva of the lids or globe.
 2. That a blow directly upon the eyeball may give rise to an ecchymosis of the conjunctiva, both of the globe and lids.
 3. That when fracture of the base of the skull is indicated by ecchymosis, this ecchymosis appears first beneath the conjunctiva of the globe, then beneath the palpebral conjunctiva, and only subsequently in the integument of the eyelids, if at all.
 4. That when the injury has been such as to make a fracture probable, external ecchymosis of the lower lid, and less frequently of the upper lid, is a significant symptom, only when it accompanies ecchymosis of the globe, or follows it, after an interval.
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Progress in Medicine.

REPORT ON PATHOLOGY AND PATHOLOGICAL ANATOMY.*

By R. H. FITZ, M.D. Harv.

GENERAL PATHOLOGY.

Diagnosis of Cancer.—Nestel publishes a paper (*Brown-Séguard's Archives*, February, 1873) wherein he agrees with many other observers in regarding malignant tumors as primarily local. He seems rather absolute in stating that primary cancer of the lungs and kidneys never occurs. The main purport of his paper is to show that the urine in cases of cancer of the liver contains large amounts of indican, the presence of which "in large quantities, in persons affected with malignant tumors, I consider as pathognomonic of carcinoma of the liver."

He supports this view by a summary of three cases, in two of which the diagnosis was confirmed by the autopsy; the third case was one of recurrent cancer of the breast.

In 1863, Hoppe-Seyler (*Virch. Arch.*, vol. 27, p. 388) ascertained the presence of a large amount of indican in a case of melanotic cancer of the orbit, and it occurred to him that it was not improbable that the dark color of the urine observed by Eiselt in 1858, regarded as pathognomonic of melanotic cancer, might be due to the increased amount of indican. A more critical examination satisfied him that such was not the case. The dark color was present in other specimens of urine from cases of melanotic cancer, and the possibility of a connection between this and the disease was not denied; at the same time, the dark color is not indican.

Jaffe (*Centrbl.*, 1872, Nos. 31 and 32) finds indican increased in all diseases accompanied by intestinal obstruction, purulent peritonitis, certain forms of diarrhoea, and in various diseases where the latter existed as a symptom.

Rosenstirn (*Virch. Arch.*, vol. 56, p. 27) finds indican increased eleven to twelve times the normal amount in Addison's disease, numerous quantitative analyses having been made. With such evidence, it must be difficult to make the increased presence of indican in the urine pathognomonic of any one disease.

Infection.—The matter of infection and infectious diseases still remains prominent in the minds of many investigators. Continued attempts to solve this problem by way of experiment are presented, though the results of these experiments are insufficient to decide the question. Facts are furnished, however, which will make the pathway more clear for those who follow.

The point has often been raised that in the blood of healthy persons spores are found, hence their presence in the blood of diseased individuals cannot be so very remarkable.

Klebs, at the August meeting of the German Naturalists, 1872, gave the results of some investigations with reference to this matter (*Allg. Med. Cent. Zeit.*, Dec. 18, 1872). Glass tubes, closed at one end, were exposed for hours to a high temperature, the open end then fused. They were next introduced into the heart of living animals, one end

* Second semi-annual Report.

broken off, and blood allowed to enter. Were the animals healthy, the blood formed a dark-red, opaque, crystalline pap, which remained unaltered for six months. The blood of animals into whom microsporon septicum had been injected also crystallized. When exposed to a temperature of 89.6° F., it liquefied, and was found to contain spores, single or united into masses. The report states, also, that "the distribution of the microsporon in sepsis, variola, and rinderpest, presents such characteristic differences that a specific distinction of them must be accepted."

Reiss (*Reichert u. Du Bois-Reymond's Arch.*, 1872; *Centrbl.*, 1872, No. 55) examines the blood of living persons in case of disease. In scarlatina, minute round bodies are seen, strongly refracting light, in part isolated, in part joined together in chains, again lying in large groups and masses. Their nature is considered infectious, because inoculation of such blood produces the death of rabbits, in whose blood similar bodies were afterwards found. As will be seen later, the results of such experiments can hardly justify the conclusions. Other bodies were found in the blood of scarlatina and other exanthemata, typhoid, acute rheumatism, puerperal fever, pneumonia, &c., similar, as Reiss thinks, to those observed by Max Schultze, Hüter and Hallier. He finds them in greatest numbers during the retrogression of the disease; the more numerous, the greater the general anæmia and exhaustion. They were also found in various chronic diseases, accompanied with anæmia or cachexia. He regards them as derived from the retrograde metamorphosis of white blood corpuscles. Inoculation with blood containing them gave negative results.

Vogt (*Centrbl.*, 1872, No. 44) examined the fluids from joints, where metastatic inflammations had occurred, with reference to the presence of spores. The joint of the living person being punctured, and the fluid observed, innumerable monads, possessing lively vital movements, were found. The corresponding uninfamed joint, and the blood in general, contained but few of these. He could not find the rod-like bacteria seen by Klebs under similar circumstances, and is inclined to regard this observation as the result of faulty method. The patient having died, the moving monads could not be found after a lapse of twenty-four hours. Rabbits were inoculated with the fluid from the diseased joint; death occurred in eight days, and in the pus taken from the point of inoculation, also in the muscular fibrils, numerous monads were seen. Inoculation of the fluid from the healthy joint produced no result.

There being little or no opposition to the fact that the inoculation of certain fluids produces infection, and it being also granted that such fluids contain spores, it becomes desirable to ascertain whether the presence of spores in infectious fluids is essential. Zülzer, at a meeting of the Berlin Medical Society, November, 1872 (*Allg. Med. Centr. Zeit.*, 1873, No. 7), after repeatedly filtering vaccine lymph, was finally able to obtain a fluid almost entirely free from bacteria. Attempting to vaccinate with this, he found that its activity was lost.

Wolf (*Centrbl.*, 1873, pp. 114 and 130) could not entirely free a fluid from germs, either by filtering, freezing, or other methods. At the same time, he ascertained that putrid blood acts wholly different from its filtrate, even when bacteria are added to the latter. His inference is, that the active principle of the putrid blood must be some

other morphological or chemical constituent than bacteria. The filtrate, in addition to relatively few bacteria, contained scarcely any odorous principle or sulphuretted hydrogen. He attempted to produce infection by the introduction of fluids containing bacteria and micrococci into the lungs. Twenty experiments were made, in eight of which disease of the lungs was found, apparently small broncho-pneumonic nodules, rarely lobular pneumonia, in the products of which large accumulations of micrococci were not found. Similar appearances were observed in animals who died from other causes, where the introduction of fungi could not be proven. Putrid alterations of the lungs, diphtheritis, miliary abscesses, containing colonies of bacteria, could not be produced by the introduction of fluids containing large amounts of fungi.

In the three other cases, where the bronchial mucous membrane was irritated previous to the introduction of the fungi, no alterations were found.

In some of the animals, an excretion of the fungi, by means of the kidneys, could be proven, though metastatic nodules could not be found in these or in other organs. In the lungs of the animals who died within six days, fungi were found to a slight extent; the lungs of those who lived six weeks contained either none at all, or very few.

In cases of infectious disease, it is well known that the lymphatic apparatus reacts more or less strongly. This is especially true of the spleen; in fact, the acute splenic tumor has been regarded as almost pathognomonic of infectious processes.

Birch-Hirschfeld (*Arch. d. Heilkunde*, 1872, p. 389) gives, as the results of experiments, that when moderate amounts of fluids containing micrococci are injected into the blood, the white blood corpuscles take them up in large numbers. After a while, probably depending on the amount injected, a progressive increase of the free cocci takes place until death occurs. In the pulp cells of the spleen, a part of the micrococci are retained, and when a large number are present, a distinct swelling of the organ occurs. If putrid fluids are injected into the serous cavities, a local inflammation results, and the animal may die before the micrococci enter the blood in large amounts; in such cases no splenic tumor is found. He has observed that in the septicæmic forms of puerperal fever, the appearances are similar to those occurring in animals in whose blood putrid fluids have been injected. Hence, where the patient dies with a splenic tumor, the infectious material must enter the circulation early; while, in the other series, the infection advances rather by way of the lymphatics, though both forms may occur.

A very interesting series of experiments have been made by Greveler and Hüter (*Centrbl.*, 1872, No. 49, and 1873, No. 5). Fluids containing monads having been injected into frogs, the mesentery, web, tongue and lungs were so prepared and placed under the microscope that the circulation could be observed. Many monads were found free in the blood, and bodies presenting the micro-chemical reaction of monads were found in the white blood corpuscles, especially in those which adhered to the walls of the vessels. Adhesion is also observed when the mesentery is prepared in the manner of Cohnheim, without previous inoculation; such occurs only after an interval of several hours. In Hüter's experiments the change was immediately observed—

within four hours after the inoculation. In the course of twenty-four hours, the adhering blood corpuscles were so numerous that nearly one-half of the capillaries had become obstructed, were cut off from the presence of circulating blood. In some instances, the monads were found clinging to the wall, producing similar effects to those caused by the white blood corpuscles. The circulation elsewhere became delayed and incomplete; capillaries, small veins and arteries were thus affected. Hüter regards the presence of monads in the white blood corpuscles as the cause for their adhesion.

Muscular Fibre in Inflammation.—The appearances of muscle as affected by traumatic inflammation, were observed by Gussenbauer (*Arch. f. Klin. Chir.*, 1872, xiii.; *Centrbl.*, 1872, p. 779). Soon after the injury, a coagulation and frequent granular opacity of the contractile substance occurs. After twenty-four hours, numerous migratory corpuscles are found in the muscular interstices; also, vigorous proliferation of the muscular nuclei, especially in those parts which are coarsely granular. These enter the granular muscular substance, force the same apart, even separating real muscle-cells. These latter form spindle-shaped fibres with transverse striæ. The fibres at the two ends of the gap then grow towards one another. Hence, the regeneration of the muscular fibres proper proceeds from the original fibres, the granular degeneration of which in no way indicates destruction. From the migratory elements, and those produced from the perimysium, cicatricial tissue results, which fills up the wound, gradually diminishing in extent, never disappearing.

Fever.—At the close of Hüter's paper, referred to under the head of infection, the theory of a mechanical origin for fever is also advocated. Traube and Senator have already brought forward the views that the essence of fever is rather a diminished radiation than an increased production of heat. Traube supposes that the small arteries are contracted. Hüter sees that one-half the vessels, where observed, are cut off from circulating blood. This would account for an increased retention of heat. The chill and sudden elevation of temperature result from the sudden obstruction. The increased pulse may be due to the heat of the blood (Senator); perhaps, also, to increased opposition in the peripheral vessels. Death may be explained by the insufficiency of the heart, or by the obliteration of numerous vessels of the nervous centres of respiration and circulation, or through both causes. The fever would not necessarily demand a pre-existing chemical blood-poisoning (Weber, Billroth). The theory is regarded as explaining metastatic inflammation in the simplest manner; in addition to the diminished radiation, however, increased production may take place.

Senator (*Centrbl.*, 1873, No. 5) endeavors to determine the condition of the vessels during the hot stage of fever, whether it be dilatation, permanent or periodical contraction. The ear of white rabbits was made use of. A pyrogenous material, sputum with glycerine, in which are but few if any micrococci, was injected. There followed remitting increase of temperature, with but slight disturbance of the general condition. Some time after the injection, when the temperature is increased, the auricular vessels are often contracted for hours. From time to time, intermitting dilatations and contractions occur, in duration and degree apparently exceeding the rhythmical movements of the vessels of healthy rabbits. "Through these observations is, for

the first time, direct proof furnished that neither a paralysis nor a permanent tetanus of the vessels exists in the heat of fever."

Hæmoglobin in Disease.—Quincke (*Virch. Arch.*, vol. 54; *Prag. Viertjrschr.*, vol. 115) has found* the hæmoglobin of the blood to be diminished to a third in cases of chlorosis and leucæmia. In five cases of nephritis in all stages, it was considerably diminished. From the latter fact, he infers that in albuminuria, the blood corpuscles take part as well as the serum. In two cases of diabetes mellitus, there was no diminution. The same resulted in a slight case of scurvy, but in another, where repeated attacks of nasal hæmorrhage had occurred, the reverse was found. In typhoid, recurrent fever, and cerebro-spinal meningitis, he observed slight changes. In pyæmia, after three weeks' duration, a notable diminution. In a case of phosphorus poisoning, despite a considerable disturbance of tissue metamorphosis, there was no change.

Jaundice.—At the meeting of the German Naturalists in 1872, Vogel speaks of the cause of icterus (*Allg. Med. Cent. Zeit.*, 1872, p. 877). He confirms Naunyn's observation that bile acids occur in all urine, hence considers that this argument for a hæmatogenous jaundice falls to the ground. In the icterus said to follow the use of chloroform, he thinks that the influence of mental action is neglected, and in several instances a gastric catarrh is known to follow, which might readily give rise to the symptom. He also contends against the idea of a catarrhal origin, it being questionable whether the symptoms are not rather the result of interrupted bile-secretion than the cause. The occurrence of jaundice previous to the gastric symptoms favors this doubt. He knows of no experiments on animals where the bile-ducts have been simply irritated, not permanently closed. His remarks seem to favor more particularly the view of a nervous origin.

(To be concluded.)

ICTERUS NEONATORUM.—Dr. F. A. Kehrler, of Giessen, publishes, in the *Oest. Jahrbuch. für Paediatrik* (II. B., 1871), a lengthy and valuable contribution to our knowledge of this subject. Dissenting from the views of Frerichs, Heidenhain and Virchow, he gives the following as the causes of icterus in new-born children.

1. Congenital contraction of the gall duct.
2. Abnormal secretion of the mucous glands of the gall bladder (Henle's glands).
3. Insufficient contraction of the ductus choledochus.

The icterus begins usually on the second or third day after birth; rarely on the first, fourth or following days. In one hundred and eight out of three hundred and ninety cases, the icterus has disappeared in the course of five days. In the greater number of instances, it passes off in six to twelve days, while some cases last from two to four weeks. A relapse is now and then seen.

A favorable prognosis can, therefore, be given, even in the most severe cases. Writers who have been inclined to regard this disease as a serious one, base their opinions upon the cases of children who were erroneously supposed to have died of icterus, but who, in reality, succumbed to some other complaint.

* By means of the colorimetric method of Preyer.

Bibliographical Notices.

The Practice of Surgery. By THOMAS BRYANT, F.R.C.S., Surgeon to Guy's Hospital. With 507 Illustrations. Philadelphia: Henry C. Lea. 1873. Pp. 284. 284

MR. THOMAS BRYANT, now for many years past surgeon to Guy's Hospital, has given us one of the best treatises on practical surgery ever published; indeed, we doubt if at the present day a more original work on this subject could be written. His own clinical experience furnishes the basis for most of his conclusions, and the rules which he lays down are clear, well defined and sensible. The materials in the wards of the hospital and in the museum have been freely used. One of the most striking excellences of the book is the abundance, originality and excellence of the illustrations. There are over five hundred, and almost all new; some of them are from drawings of cases, others from specimens in the museum, and others illustrate modes of surgical procedure or operation. The introductory chapter is one of the best, and is mainly on the subject of diagnosis, the correct making of which is the foundation for a cure. A conclusion must be reached by a process of elimination, every probability being considered and weighed; a diagnosis framed on probabilities is considered very hazardous, though occasionally brilliant. The "Points for Observation in Surgical Cases," appended to the introductory chapter, will be found to be very valuable, inasmuch as method in investigation is much more satisfactory and certain than irregular examination and hap-hazard questioning. Figure I., illustrating the repair of a wound by granulation, is from an excellent microscopical section by Mr. Howse, and is a specimen of what an illustration should be. Injuries of the head follow after several chapters on repair, inflammation, traumatic fever, pyæmia, &c.; they are well described, and are made clear by drawings from specimens in the Museum of Guy's. Seventeen "General Conclusions" complete the chapter on the "Treatment of Head Injuries," and are as valuable for reference as the "Points for Observation" mentioned above. We are glad to see that the writer advocates the use of the noose in the removal of nasal polypi; had he gone further, however, and advised the use of the illuminating mirror, also, we should have been better pleased. How much more scientific and intelligent it is to illuminate the nasal cavity with direct or reflected light and place the loop of a wire snare round the base of a polypus, than to grab in the dark with a pair of forceps, and sometimes get the polypus and sometimes more or less of a turbinated bone! Mr. Bryant also mentions that "Dr. Thudicum successfully employs the wire snare; but instead of tearing away the growth, he cuts it off, heating the wire with the galvanic cautery." We are aware that the snare may sometimes be superseded by the forceps, but the former mode is more intelligent, infinitely less painful, and should be adopted if possible.

It is surprising that the author does not mention the operation of displacing the upper jaw in part, in order to get at a growth in the posterior nares; this brilliant operation, which has been so successfully performed here by Drs. Hodges and Cheever, and is, so far as the writer knows, original with Langenbeck, should have found a place in any modern

work on surgery. Surgical affections of the larynx and trachea are treated at length; a description of the laryngoscope and of the mode of using it is given. The "horse-hair probang," for removing foreign bodies from the œsophagus, is mentioned and figured. This is one of the most ingenious and effective instruments we have, and it would be interesting to know who was its originator. We do not notice that the subcutaneous injection of morphia in abdominal injuries is suggested, though the administration of opium is insisted on. The magical relief given by the injection of half a grain or grain of morphia in intense abdominal pain caused by a severe blow, makes such an impression that a surgeon would hardly forget to mention this mode of treatment, if he had ever seen it. Besides, in these cases, there is often persistent vomiting, and opium by the mouth is of little service. Next to the discovery of anæsthetics, that of the subcutaneous injection of morphia is the greatest triumph of modern therapeutics. The pneumatic aspirator is described and figured, and is considered a valuable aid to diagnosis.

In regard to the operation for the radical cure of hernia, Mr. Bryant says:—"For my own part, I believe that where a hernia can be kept up by a truss, and the patient is likely to remain in a civilized country where trusses can be obtained, any operation for the radical cure is an unjustifiable one; to risk the life of the patient on the theory of a cure, with the probability that the patient will be less liable to its descent, when a truss has to be worn subsequent to the operation as a matter of safety, is a practical delusion." This is good common sense and sound surgery. Mr. Wood's operation is described carefully and at length, and his drawing illustrating it is reproduced.

The directions for treating the various kinds of wounds are clear, and are illustrated by wood-cuts. For instance, Fig. 194, "How to do it," and "How not to do it," shows the right and the wrong way of sewing up an incised wound. Skin grafting is described and advocated in a chapter of four pages, and, like all the other methods mentioned in the work, is well illustrated. The chapter on stricture of the urethra and its treatment is a very able and original one, and will repay perusal. We cannot, however, agree with Mr. Bryant in considering Mr. Cock's operation "*as the operation for external urethrotomy without a staff*." (The italics are our own.) To describe Cock's operation at length, would take too much space; briefly, it consists in plunging a knife through the perineum into the urethra at the apex of the prostate, the guides being the median line and the tip of the finger in the rectum; the wound is to be made by a single stab. The cases must be very rare where a patient dissection and division of the stricture in the perineum is not more scientific, intelligent and humane, or where tapping through the rectum, or, with the pneumatic aspirator, over the pubes, would not be preferable. But the reader must go through this chapter patiently, and he will find much instruction and entertainment in it.

Tumors are divided into innocent, semi-malignant or recurrent, and malignant, and these again are described structurally. The chapter on the microscopical anatomy of tumors is written by Dr. Moxon, and contains a great deal of valuable information in a condensed form; the illustrations are excellent. In the chapter on dislocations of the lower extremities, Prof. Bigelow's treatise on the Hip is, of course, referred to, and the Y ligament is figured. The chapters on diseases of the

joints will well repay careful study. In the chapter on anæsthetics, the many valuable aids given by them in diagnosis, are enumerated, the great relief to the operator and patient in all plastic operations, the more certain cures in vesico-vaginal fistula, the ease with which dislocations are reduced, and many other advantages are mentioned. The author thinks highly of a mixture of alcohol, ether and chloroform. Here, we should leave out the first and last ingredients, and use ether alone, as being perfectly safe, satisfactory, and the best anæsthetic known.

On the whole, we are ready to repeat our first statement, that Mr. Bryant has given us one of the best treatises on practical surgery ever published, and think that the student could not have a much better book for instruction nor the surgeon for reference.

J. H.

Club-Foot: Its Causes, Pathology and Treatment. Being the Essay to which the Jacksonian Prize for 1864, given by the Royal College of Surgeons, was awarded. By WILLIAM ADAMS, F.R.C.S. Second Edition. Pp. 464. Philadelphia: Lindsay & Blakiston. 1873.

This interesting book may be said to maintain a position as a classical work on the subject of which it treats, and, in addition to its scientific value, possesses the advantage of being published in an exceedingly attractive form. It has gained the dignity of a second edition, and, indeed, bids fair to run through a number of editions, for it will probably be long before any work of equal merit or of so exhaustive a character will be presented to the profession. In addition to a general revision of the book, we find an exceedingly interesting chapter on the reunion of tendons after subcutaneous tenotomy, the greater part of which has been added to the essay in this edition. Illustrating the pathological changes described in this chapter are a number of plates, showing the changes visible to the naked eye in tendons at various periods after tenotomy, together with the histological appearances observed in the reparative process. According to Mr. Adams, the exact nature of the process by which the union of tendon takes place has long remained a matter of uncertainty, the point at issue being "whether the new material formed for the purpose of reuniting the cut extremities of the tendon remains a permanent tissue, forming an integral part of the tendon and thus producing the required elongation." It seems that Hunter, who happened to rupture his tendo-achillis whilst dancing, was one of the first to study the method of repair, and some of the specimens procured by his experiment are still preserved in the College of Surgeons; since his time a large number of similar experiments have been performed, but the views of the various observers have differed widely on the part played by the effused blood, the so-called inflammatory lymph, and particularly the sheath of the tendon in the reparative process. Mr. Tamplin, Stromeyer and others, believe that the new material formed between the divided ends of the tendon is provisional merely, and subsequently contracts to a linear cicatrix or disappears entirely, the elongation being obtained at the cost of the contractility of the muscle. Mr. Adams's views on this point, as on others connected with this subject, have been based upon the results of fifteen *post-mortem* examinations, on persons operated upon for club-foot, made at periods varying from four days to three years after

operation, and also upon numerous experiments upon animals. Although the separation of the ends of the tendon may be sometimes very great, they are still connected by the sheath, which is not materially injured by the operation, or by the loose connective tissue which takes its place. A small amount of blood is effused, which, however, has little to do with the process of repair; indeed, according to Mr. Adams, if the effused blood be sufficient to fill the sheath and the surrounding tissues, the process will be materially interfered with. We are inclined to doubt the correctness of this statement, for it is well known how readily extensive clots are disposed of which interfere in no way with the cell-formations going on in and about them. The next change which we find, according to Mr. Adams, is the appearance of "a blastematos material, in which the cell-forms do not pass, in development, beyond the stage of nuclei." This, he says, is the proper reparative material from which new tendon is developed, and is furnished by the sheath. We confess to being somewhat startled to see such expressions as that used above, in regard to the cell-formation, in a book bearing the date of 1873. *Mais c'est un detail*, and we refrain from further criticisms of Mr. Adams's account of histological processes, for fear of incurring the scorn of our gentle reader, the so-called practical surgeon. Suffice it to say that the material alluded to eventually becomes tendon, or something very nearly like it, both microscopically and macroscopically. The ends of the old tendon at this time are found to be separated into bundles of fibres, between which the new material insinuates itself in such a manner as to produce a dove-tailing of the new structure with the old. This new tissue does not contract, as before described, but is a permanent one, and is occasionally of considerable length—the greatest seen by Mr. Adams being two and a quarter inches. To the naked eye, this new tendon presents a grayish, translucent appearance, by which it is readily distinguished from the old. This appearance, however, cannot be observed after preservation in alcohol and other fluids, and hence the errors of former observers. The last change which takes place is the formation of a separate sheath, which is effected in a more or less complete manner. There is generally a fibrous band uniting the tendon to the sheath at some point, even in the best cases, but it is not short enough to interfere with the play of the tendon.

Mr. Adams is of the opinion that non-union of tendon may occur, but it is exceedingly rare. In regard to extension, he says this should be gradual and not immediate, the object being not to stretch the new material, but rather to regulate its length. All the changes above described are shown in the series of plates alluded to, which add greatly, in our opinion, to the value of the work. Those giving the microscopical appearances are not quite up to the standard that we should like to see in a book of this kind, but perhaps are as good as we are likely to see in English or American surgical works for some time to come. The practical part of the work leaves little to be desired; the illustrations are finely executed, and, though quite numerous, could none of them be easily omitted, serving, as they do, in every case, to make clear some instructive point.

We have seen few surgical monographs that are equal in completeness and high merit to this one.

W.

Boston Medical and Surgical Journal.

BOSTON: THURSDAY, APRIL 17, 1873.

"BASEBALL is a healthful exercise." "Baseball is not a healthful exercise." Such, as reported, is the conflicting evidence of witnesses before a committee of the City Government on a petition of baseballists that a part of Boston Common be again surrendered to them for baseball purposes. Had we been called on to offer an opinion on this subject, we should have been disposed to ask whom the inquiry concerned; whether the so-called baseball "nines," or the "three thousand spectators," who stand like statues from 2 o'clock to 6 P.M. in the bleak winds of early spring. If beneficial to some of the "nines," it must be productive, at this season of colds and rheumatism, to the "three thousand," while at no season of the year does it afford them any healthful exercise whatever.

The boys' game with which the associations of many of the present generation are connected, bears the same relation to modern adult baseball, that an exhilarating horseback ride in the country has to the performances at a race-course, whether of daily training, or of long-anticipated matches by professionals, upon which large sums of money are staked. And the crowds are of much the same heterogeneous sort, being mostly composed of persons having little regular occupation, of all ages, and not always the most profitable associates for boys. Boston Common is now wanted for these spectacles; and for similar exhibitions by amateur clubs of men, to whom it is naturally agreeable to disport themselves before admiring thousands.

The fact seems to be that when a city becomes so large that a surrender for special purposes, of any of its open breathing-places, vitiates the air by dust (especially if it interferes with public travel, or, indeed, with the comfort or enjoyment of the community at large), such monopolies must give way to the advantage of the whole. It has long ago been settled that in such vacant spaces of large cities, green lawns protected by law are conducive to the greatest health and the greatest convenience of the greatest number. In the immense city of New York, for example, the City Hall Park, Tompkins Square and the Battery, which, but a short time ago, had become arid fields of dirt and dust, have been now laid down to grass with intersecting paths, to which travel is confined. We believe it to be only a question of time how soon our little Common will be more cultivated, its soil enriched, its hills terraced, the flats intersected by paths, ornamental as well as

useful, with abundant and shaded seats, where the tired artisan may enjoy his pipe, or the weary sewing girl her book, breathing air free from dust, and feasting their eyes upon a luxuriant vegetation. One thing is certain; you cannot tread out your grass and have it too.

THE Berlin correspondent of the *London Daily Times* writes as follows concerning public improvements in the Prussian capital:—

At last the Augean stables of Berlin are to be cleansed. After an interminable discussion of nearly ten years, the Town Council, a few days ago, made up its mind and voted the canalization of the capital. We thus have the prospect of being ultimately delivered from a nuisance which, of the many inconveniences occasioned by the rapid growth of this metropolis, was the gravest and the one most generally felt. That the decision has been so long delayed was owing, not to any indifference on the part of the inhabitants to the primary conditions of health; it, on the contrary, arose from the peculiar difficulties attaching to the question in this town and the universal interest it excited. If the drainage question is far from being satisfactorily solved in any large capital, it is specially complicated in Berlin, a city situate on a dead level, with only a couple of small rivers in its neighborhood, and at a long distance from the sea. It must be admitted the matter was sufficiently hard to deal with to allow of very diverse opinions being advanced with some show of right, and as the professional men of this country combine the scholar with the engineer, you may be sure they did not permit the opportunity to escape them unimproved. The learning they displayed in handling the matter, the ardor they showed in the course of the debate, and the hubbub they raised with all their writings, meetings and petitionings, instead of accelerating a decision only served to delay it indefinitely. At one time, it so bewildered the members of the corporation as to render it an apparently hopeless case. On the one hand, there was the cartage party stoutly contending that canalization had answered nowhere, and that it would do so least of all at Berlin; that the gigantic problem of removing refuse matter was as far as ever from a scientific settlement, and that this city, not being able to compete with London in riches, should not presume to imitate it in an expensive and doubtful experiment. In the Berlin climate, we were further told that to protect the pipes against the frost, they would have to be sunk so deep as to increase considerably the cost of the works. Again, steam-engines would have to be employed to keep the contents of the pipes flowing and to pump them up again outside the town; and what was to be done with the odorous fluid when it got there? The Spree and the Havel had not water enough to burden them with an ocean of dirt. Had not Berlin become so pestilent because the new parts of the town—the parts erected within the last fifteen years—had been permitted to discharge a portion of their filth into the public water-courses, while the rest of the capital now, as formerly, adhered to cartage *pur et simple*? And was now all the precious manure of the place to be thrown away merely to render the environs uninhabitable, if, indeed, the town could, by canalization, be freed at all from the annoyance? Much better adopt an improved cartage system, on the Paris model. These

arguments were met by the Canalisateurs proudly pointing to the meadows irrigated by sewerage in various places in England and Germany. If, these asserted, the obnoxious liquid were carried off by pipes radiating from the centre of the capital there would be no difficulty whatever in applying any possible quantity to the formation of artificial meadows. The sandy soil of the country all around would absorb any amount of the nourishing moisture, and make the land produce enormous quantities of delicious grass where now only a few scanty potatoes reared their sickly leaves out of the sandy wilderness. To prove the accuracy of their assertions, the Canalisateurs so far prevailed upon the municipal authorities as to induce them to make a few experimental meadows of the sort recommended by them. But even this did not settle the controversy; for if the Canalisateurs were in raptures with the quality of the crop produced, and offered to eat it themselves, the champions of the night cart were as loud in proclaiming the opposite, and had terrible stories to relate about the decline and fall of imprudent quadrupeds who had been rash enough to munch the municipal grass. At last the Town Council, being at their wits' ends, yet recognizing the necessity of doing something, determined to leave the decision practically to a single man, of known competence and integrity. Accordingly, Prof. Virchow, the great physiologist, and a member of the Council, was commissioned to draw up a report which should contain an account of the various opinions advanced, with a summary of the conclusions he had arrived at. The Professor required rather more than a year to finish his report, but when he did so the controversy was at an end. Reviewing with consummate skill the various systems proposed, and having due regard to the reports of previous municipal committees despatched to London, Paris, Antwerp, &c., the Professor wound up by giving his verdict in favor of canalization. Fortunately, the municipal elections, being close at hand, gave his party the majority in the Council, and enabled it to defeat the opposition by a decisive vote a few days ago. It deserves, however, to be mentioned that, in deference to the opinion of the minority, every house owner will be left the option of either connecting his property with the canals or adhering to cartage, which is to be entirely reorganized on a deodorizing system. The liberality of this concession was the more advisable as it is to be foreseen that few proprietors will cling to the latter method when the advantages of the former are once placed within their reach. The works will probably begin at an early date, the cost being estimated at rather above two million pounds. As to the water-courses of the Thier Garten, so offensive last summer as to render that beautiful park absolutely unapproachable, they were refreshed in the autumn by a continuous stream of fresh water poured into them at various points. If Berlin has been thus tardy in undertaking these necessary works, she may still indulge the scientific boast that it is to the erudite investigation of the subject she has sacrificed so long nose and health before coming to a conclusion. I verily believe that the books, pamphlets, speeches, leading articles, and reports which have appeared in print on the savory topic would be sufficient to fill a library. Of course, it may be questioned whether this is a sufficient compensation for the 39 annual deaths for every thousand inhabitants Berlin has lately shown, against the 19 she had only fifteen years ago, and the 24 London has now.

POSITIONS FOR CATHETERISM.—Mr. Teevan, Surgeon to West London and St. Peter's Hospitals, says, in *London Lancet*, Feb. 15th, 1873, that the sitting position is best for the surgeon and the standing best for the patient. The following are some of his reasons:—

"However prolonged the operation may be, the surgeon will not become fatigued; . . . it is the one position in which he enjoys the maximum amount of mobility with the minimum of power, and is therefore the one position in which he is least likely to make a false passage. . . . If the surgeon adopts the sitting position, I feel convinced that he will, in the long run, prove a far more successful operator than one who stands, and that he will often succeed where the latter has failed."

In the patient "what we desire is fixity, and we shall best achieve this object by placing him upright against the wall, and stretching his penis horizontally forwards. So situated, we have at last obtained all that can be desired; for the urethra, instrument, and direction of force are all in the same horizontal and vertical plane, and our axis of vision will nearly correspond. Thus, therefore, we shall be able to impress on the point of the catheter, when lost to view, any direction we may desire it to seek, and our operation will no longer be an exhibition of blind and unguided force, but a successful demonstration of applied skill."

Correspondence.

THE GREAT CHARITY.

MESSRS. EDITORS.—Permit me to call attention to "The Great Charity," as it is termed in this city, by the Quaker philanthropist, John Hopkins. First, to my editorial of March 14th, clipped from the *Baltimore American* of that date:—

Mr. John Hopkins's contribution of something more than four millions of dollars to build and endow a free hospital in Baltimore, places his name before the world in company with those of Peabody, Miss Burdett Coutts, Peter Cooper, Stewart, Girard, the Warrens of Boston, McDonough, and others who have made use of their wealth for the benefit of humanity. His plan is as practical as its inspiration was honorable. To donate his fortune while he was yet alive and able to oversee the use of it, in connection with a trusted Directory, is to accomplish his purpose to the best advantage of the institution, and to avoid the legal entanglements and post-mortem trials which are a common sequel to similar legacies. Moreover, Mr. Hopkins makes a good use of his means when he unites his splendid hospital of four or five hundred beds with the Medical Department of the University, thus supplying a deficiency in opportunities for medical training that has heretofore been prominent in Baltimore, and of which we spoke a few days since. Probably these increased advantages will draw to Baltimore five hundred students from other sections of the country, who would, of course, contribute to the wealth and trade of the city. The medical book trade, the drug trade, and the manufacture of instruments, will receive an impetus from them.

The design of Mr. Hopkins to connect his hospital and university ought to be an argument in favor of at once throwing open the hospitals of the city to the medical students, in imitation of London's St. George's, St. Thomas', or St. Bartholomew's, or New York's Bellevue, one of the foremost medical schools of the time.

The feature of educating nurses, too, is wise and correct; a necessity of long standing in this country and causing much suffering and many mishaps.

Mr. Hopkins certainly deserves credit for his great forethought and correct study of the demands of his charitable institution. And in this connection the female medical student is brought before us, and we must be frank and ready to acknowledge her mission all over the wide world. For a long time it was a mooted question by the savans at large whether or not they should face public sentiment and admit women to the studies of the healing art. Now it is no longer a query. Home and abroad her demands are heard, and she is freely admitted as a student on equal terms with the other sex. In the delicate diseases of her sex, she is fast becoming mistress of the position.

Mr. Hopkins, also, in his characteristic letter, alludes to a desire—a very reasonable and happy one, too—that the hospital and other institutions which shall perpetuate his name should be an ornament as well as a benefit to Baltimore. This may be carried out in a measure with little or no extra expense, with the university and the grounds donated, but the day for stately buildings for hospital purposes has gone by. Their heavy walls collect the germs of malignant diseases and retain them for the coming inmates. They are difficult of ventilation and incapable of suitable divisions for the different classes of patients. "The ward plan," which consists of a building one story high and wide enough for two rows of beds and a centre aisle, is now adopted in all new structures of the character. They are susceptible of proper ventilation and of the most convenient arrangements for light, heat and water, and the removal of refuse matter. The wards can be disinfected rapidly, and all deleterious germs destroyed by chemical means. The isolation of different contagious diseases can only be perfected in such a structure.

This plan was introduced, some years ago, at De Camp General Hospital, on David's Island, New York Harbor, which, during the war, was the largest hospital in the world, containing some four thousand beds. Under the charge of Surgeon Warren Webster, it was considered the model Government hospital of the country. Among many others which have adopted this plan, we may mention the great St. George's Hospital on the Surrey side, in London, which has lately been endowed by the will of a wealthy citizen to the amount of £1,000,000 sterling. The institution covers over five acres of ground, and is built on the ward plan.

In conclusion, Messrs. Editors, let us notice the formation of the Epidemiological Society of Maryland, I think the only one of the kind in our country, and, perhaps, with one exception (Edinburgh, Scotland), the first in the world. This Society originated through our City Fathers appointing one hundred medical gentlemen to form a vaccination association. They have had several meetings, made or adopted a constitution and by-laws, and appointed committees on the various epidemics, as well as correspondence at home and abroad.

Baltimore, 4th month 9th, 1873.

J. J. CALDWELL, M.D.

MESSRS. EDITORS,—On looking over the records of the Massachusetts Medical Society, I find that their early meetings were held at the following places, viz.:—The Manufactory House; Stockholders' Room in the Bank; Mr. Furness's painting room in Court St.; hired room in Court St.; Concert Hall; James Vila's; Vila's Tavern; Franklin Hall; Boston Library; Hall of Massachusetts Medical Society; new building rear of the Athenæum, Pearl St.; Senate Chamber; Selectmen's Room.

Of some of the above there is of course no doubt. Concert Hall existed until within a few months. Franklin Hall and Boston Library were, perhaps, one and the same room in Arch St. The Hall of the Massachusetts Medical Society, where was it? The Senate Chamber we know. The Selectmen's Room—was it in the Old State House? The new building in the rear of the Athenæum in Pearl St., if not pulled down some years ago, was burned down this last fall. Where were the other points? Can any one inform an

INQUIRER.

Medical Miscellany.

AT a late meeting of the Obstetrical Society of London, Drs. Fordyce Barker and T. Gaillard Thomas, of New York, were elected Honorary Fellows of the Society.

A FAIR for the benefit of the Carney Hospital opened at the Music Hall, on Monday, and will continue two weeks. The professional staff and the management of the hospital are excellent, the building is good, and its situation is finer than that of any other in the city. Though the institution does much good, the want of money prevents its advantages from bearing as much fruit as they should and will bear if the fair does as well as its object deserves.

TRICHINOUS PORK.—In the course of a recent discussion on trichinosis in the Medical Society of Magdeburg, twenty-six physicians who were present stated that they had under their care at the time a hundred of the inhabitants of the town, who had purchased pork containing trichinæ from the same slaughter-house within the same week, and had eaten it nearly raw.—*British Medical Journal*.

CRIMINAL CHLOROFORMIZATION.—“*En France on est moins crédule*”—they don't believe English and American stories of violations and robberies committed on persons chloroformed “in the most unconscious and surreptitious manner.”

The Medico-Legal Society, according to the *Jour. de Med. et Chir. Prat.* for March, 1873, proved, by a series of experiments, that a person already in natural sleep is awakened by the slightest inhalation of chloroform; and, when awake, chloroformic torpor cannot take place without being accompanied by a kind of anguish, similar to asphyxia, so aggressive as to render involuntary submission incredible.

In cases such as those referred to in England and America, chloroform has undoubtedly duped some one; but that some one is the public!

A LEARNED MENU.—The following is the bill of fare of a banquet recently held at Munich on the celebration of the jubilee of the university:—

Gustatio.

Pisciculi oleo perfusi et salmones fumo siccati ad cibi appetentiam excitandam.

Mensa prima.

Jus pingue testudinaceum carnali succo Liebigiano conditum.

Salmones Danubiani cum liquamine e bulbis rotundis americanis.

Bovini lumbi assi, omnibus horti olitorii deliciis coronati.

Caro ferina inter fungos natans opere pistorio inclusa (vol-au-vent de gibier aux champignons).

Squillæ cum vitellis oleo et aceto in unum mixtis.

Pisa novella coctura Apiciana macerata.

Mensa Secunda.

Placenta major dulciaria opere tectorio sigillis aliisque artificii mirabilem in modum ornata.

Figura pueruli Monacensis congelata.

Frugum regionis glacialis genera varia botanicorum oculis et studiis nunc primum proposita.

Vinum dulce Hispanicum, molle Silvestre, mite

Burdigalense, fortius Palatinum,

Spumans Campanum.

—*London Medical Record.*

NO MORE CAKES AND ALE—HE'S ONLY A PAUPER.—"We are sorry," says the London *Medical Times and Gazette*, "to observe that the medical officer of St. George's-in-the-East Workhouse, against the unanimous wish of the Guardians, is strenuously opposing what is in most workhouses a customary allowance of beer for paupers who work as tailors, shoemakers, &c., thus partially recouping the parish for their keep. It is difficult to conceive what valid objection the doctor can have against the very moderate allowance of beer customary in such cases. However, as the Poor-law Orders require the sanction of the medical officer to the bestowal of malt liquors, we suppose the working inmates will be deprived of their harmless luxury."

PRESERVATION OF FOOD.—At the meeting of January 27th, of the Academie des Sciences at Paris, M. Boussingault stated that he had preserved food since 1865 in a closed vessel under the action of a refrigerating mixture giving 20° below zero (Cent.). Soup and cane sugar had in this way been preserved from all change.

A REMEDY FOR INFLUENZA.—Dr. A. McLane Hamilton recommends the following mixture as effective in cutting short the influenza which is now prevailing so extensively:—

R. Acid. carbolic., min. x;
Tinct. iodinii, } aa 3ij. M.
Chloroform, }

This mixture is to be volatilized by means of a test-tube and spirit lamp, and then inhaled by the patient, the inhalation being repeated every two or three hours. A violent fit of sneezing is said to be produced at first, which is afterwards succeeded by a diminution of the symptoms.—*The Medical Record*, March 1, 1873.

ANSWERS TO CORRESPONDENTS.

Dr. C. D. Homans is the Corresponding Secretary, and Dr. C. W. Swan the Recording Secretary of the Massachusetts Medical Society.

There is no chair of Electricity in the Harvard Medical School. Dr. J. J. Putnam is delivering a course of University lectures on the subject.—Eds.

MORTALITY IN MASSACHUSETTS.—Deaths in seventeen Cities and Towns for the week ending April 5, 1873.

Boston, 140—Charlestown, 12—Worcester, 13—Lowell, 23—Milford, 1—Chelsea, 7—Cambridge, 23—Salem, 15—Lawrence, 12—Springfield, 9—Lynn, 19—Gloucester, 7—Fitchburg, 7—Newburyport, 2—Somerville, 7—Fall River, 26—Haverhill, 11. Total, 334.

Prevalent Diseases.—Consumption, 42—cerebro-spinal disease, 31—pneumonia, 31—scarlet fever, 15.

Smallpox caused two deaths in Boston, one in Worcester, one in Lowell, and one in Gloucester. Cerebro-spinal disease caused fourteen deaths in Boston, six in Haverhill, three in Charlestown, two in Springfield, two in Lynn, and one in each of the following places:—Lowell, Chelsea, Cambridge and Lawrence.

GEORGE DERBY, M.D.,
Secretary of the State Board of Health.

DEATHS IN BOSTON for the week ending Saturday, April 12th, 140. Males, 63; females, 77. Accident, 2—abscess, 1—apoplexy, 2—asthma, 1—inflammation of the bowels, 2—bronchitis, 6—inflammation of brain, 1—congestion of brain, 1—disease of brain, 11—burned, 1—cancer, 4—cholera infantum, 1—cerebro-spinal meningitis, 12—consumption, 22—convulsions, 6—croup, 2—cyanosis, 1—debility, 2—dropsy, 1—dropsy of the brain, 3—exhaustion, 1—exposure, 1—epilepsy, 1—erysipelas, 1—scarlet fever, 7—typhoid fever, 1—disease of the heart, 1—hemorrhage, 2—intemperance, 1—disease of the kidneys, 2—disease of the liver, 1—congestion of the lungs, 3—inflammation of the lungs, 14—marasmus, 6—mortification, 1—paralysis, 3—pleurisy, 1—premature birth, 2—peritonitis, 1—puerperal disease, 4—smallpox, 2—unknown, 3.

Under 5 years of age, 56—between 5 and 20 years, 12—between 20 and 40 years, 36—between 40 and 60 years, 21—over 60 years, 15. Born in the United States, 99—Ireland, 25—other places, 16.